AMENDMENTS TO THE CLAIMS

1-45. (Cancelled)

46. (Currently Amended) A neuromodulation lead for implantation within a body of a patient, comprising:

a first plurality of conductors that are individually electrically isolated and are spirally wound along the lead in a non-overlapping manner;

a second plurality of conductors that are individually electrically isolated and are spirally wound along the lead in a non-overlapping manner;

a solid matrix of fused insulative material surrounding and electrically insulating each of the first and second plurality of conductors thereby forming a lead body, wherein the solid matrix of materials (i) retains each of the first plurality of conductors at the substantially same first radial depth in the lead body, (ii) retains the second plurality of conductors at the substantially same second radial depth in the lead body, the second radial depth being underneath the first radial depth, and (iii) retains each conductor of the first and second plurality of conductors at a prescribed distance from adjacent conductors, wherein the solid matrix of fused insulative material does not possess an inter-layer discontinuity ~~boundary~~ between the first and second radial depths along a substantial length of the neuromodulation lead; and

a plurality of electrodes with each electrode coupled to at least one conductor of the first and second plurality of conductors.

47. (Previously Presented) The neuromodulation lead of claim 46 wherein the first plurality of conductors comprises eight conductors.

48. (Previously Presented) The neuromodulation lead of claim 47, wherein the neuromodulation lead possesses a diameter less than 9 French.

49. (Previously Presented) The neuromodulation lead of claim 47, wherein the neuromodulation lead possesses a diameter less than 5 French.

50. (Previously Presented) The neuromodulation lead of claim 46 wherein the second plurality of conductors comprises eight conductors.

51. (Previously Presented) The neuromodulation lead of claim 50, wherein the neuromodulation lead possesses a diameter less than 9 French.

52. (Previously Presented) The neuromodulation lead of claim 50, wherein the neuromodulation lead possesses a diameter less than 5 French.

53. (Previously Presented) The neuromodulation lead of claim 46 wherein the first and second plurality of conductors comprise sixteen conductors.

54. (Previously Presented) The neuromodulation lead of claim 53, wherein the neuromodulation lead possesses a diameter less than 9 French.

55. (Previously Presented) The neuromodulation lead of claim 53, wherein the neuromodulation lead possesses a diameter less than 5 French.

56. (Currently Amended) A neuromodulation system, comprising:

a pulse generator for generating electrical pulses for delivery to nerve tissue of a patient; and

a neuromodulation lead for implantation within the patient and that is electrically coupled to the pulse generator for receiving the electrical pulses, the lead including:

a first plurality of conductors that are individually electrically isolated and are spirally wound along the lead in a non-overlapping manner;

a second plurality of conductors that are individually electrically isolated and are spirally wound along the lead in a non-overlapping manner;

a solid matrix of fused insulative material surrounding and electrically insulating each of the first and second plurality of conductors thereby forming a lead body, wherein the solid matrix of materials (i) retains each of the first plurality of conductors at the substantially same first radial depth in the lead body, (ii) retains the second plurality of conductors at the substantially same second radial depth in the lead body, the second radial depth being underneath the first radial depth, and (iii) retains each conductor of the first and second plurality of conductors at a prescribed distance from adjacent conductors, wherein the solid matrix of fused insulative material does not possess an inter-layer discontinuity ~~boundary~~ between the first and second radial depths along a substantial length of the neuromodulation lead; and

a plurality of electrodes with each electrode coupled to at least one conductor of the first and second plurality of conductors.

57. (Previously Presented) The neuromodulation system of claim 56 wherein the first plurality of conductors comprises eight conductors.

58. (Previously Presented) The neuromodulation system of claim 57, wherein the neuromodulation lead possesses a diameter less than 9 French.

59. (Previously Presented) The neuromodulation system of claim 57, wherein the neuromodulation lead possesses a diameter less than 5 French.

60. (Previously Presented) The neuromodulation system of claim 55 wherein the second plurality of conductors comprises eight conductors.

61. (Previously Presented) The neuromodulation system of claim 60, wherein the neuromodulation lead possesses a diameter less than 9 French.

62. (Previously Presented) The neuromodulation system of claim 60, wherein the neuromodulation lead possesses a diameter less than 5 French.

63. (Previously Presented) The neuromodulation system of claim 56 wherein the first and second plurality of conductors comprise sixteen conductors.

64. (Previously Presented) The neuromodulation system of claim 63, wherein the neuromodulation lead possesses a diameter less than 9 French.

65. (Previously Presented) The neuromodulation system of claim 63, wherein the neuromodulation lead possesses a diameter less than 5 French.